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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/551,832

10/03/2005

Francoise M. Thomas

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1333 7590 10/15/2009
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EXAMINER

CLARK, GREGORY D

ART UNIT

PAPER NUMBER

1794

MAIL DATE

DELIVERY MODE

10/15/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/551,832	Applicant(s) THOMAS, FRANCOISE M.	
	Examiner GREGORY CLARK	Art Unit 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 July 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

The examiner acknowledges the receipt of the applicants' remarks dated 07/01/2009. Claims 1-8 currently amended.

Rejections and objections made in previous office action that do not appear below have been overcome by applicant's amendments and therefore the arguments pertaining to these rejections/objections will not be addressed.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. **Claims 1-6 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki (US 6,344,262) in view of Lofquist (US 4,083,893).**

3. **Regarding Claims 1 and 2,** Suzuki discloses an ink jet recording element containing a support and a porous layer (ink receiving layer) containing alumina hydrate (inorganic filler) and Mg ions/SCN ions (abstract). Suzuki further discloses that the Mg ions and SCN ions are added to improve the ozone resistance (column 1, lines 54-55). Suzuki further mentions that the support (substrate) can include paper sheets and

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cloths (column 2, lines 13-14). Suzuki fails to disclose the use of sulfonic polystyrene as a component of the ink receiving layer to improve the ozone resistance.

Lofquist discloses a printable nylon (cloth) substrate that contains a magnesium or calcium salt of sulfonated polystyrene to provide lightfastness and ozone resistance (abstract).

The examiner notes that Lofquist discloses how to render nylon (a type of cloth material) ozone resistant with the use of the salt of sulfonated polystyrene and Suzuki discloses that Mg ions/SCN ions are added to improve the ozone resistance in the porous layer located on a substrate (cloth).

The examiner takes the position that the cloth substrate disclosed by Suzuki is inclusive of the nylon substrate disclosed by Lofquist and the methods disclosed by both references merely represents two functionally equivalent approaches to achieve ozone resistance on printable media.

It would have been obvious to a person of ordinary skill in the art to have selected from known approaches to render a printable substrate more ozone resistant which would have included the use of the salt of sulfonated polystyrene as disclosed by Lofquist.

Lofquist fails to mention specifically the use of the sodium or lithium salt of sulfonated polystyrene.

The examiner takes the position that the salt with various counter ions including sodium and lithium would have been readily known at the time of the invention and the

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ozone resistance effect would have been the same of similar, absent unexpected results.

4. **Regarding Claims 3 and 4**, Suzuki and Lofquist disclose the use of sulfonated polystyrene but fail to mention the amount use in the receiving layer. The applicant claims 0.1-10% by weight.

As Lofquist discloses the use of sulfonated polystyrene to affect ozone resistance, through routine experimentation the proper amount would have been determined and the effectiveness after exposure to ozone would have been readily detectible due to the a reduction in fading of the cloth surface when a suitable amount of sulfonated polystyrene was present. Likewise when a less than suitable amount of sulfonated polystyrene was present, one would expect a loss of colorfastness after exposure to ozone.

At the time of the invention it would have been obvious to a person of ordinary skill in the art, to have adjusted the amount of sulfonated polystyrene present in the receiving layer to reach a point of suitable ozone resistance which would have included the claimed range.

5. **Regarding Claim 9**, Suzuki discloses that the inkjet recording element contains a hydrophilic binder such as polyvinyl alcohol (column 3, lines 57-59).

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6. **Regarding Claims 5 and 6**, Suzuki discloses that the inkjet recording element contains inorganic fillers (alumina hydrate, metal hydroxide) (abstract).

7. **Claims 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki (US 6,344,262) in view of Lofquist (US 4,083,893) and further in view of Sadasivan (US 6,419,356).**

8. **Regarding Claims 7 and 8**, Suzuki discloses that the inkjet recording element contains inorganic fillers (alumina hydrate, metal hydroxide) (abstract) but fails to mention fumed alumina or calcium carbonate.

Sadasivan discloses an ink jet element where the receiving layer contains inorganic particles (abstract) that can include alumina, silica, fumed silica, boehmite and calcium carbonate (column 3, lines 38-44). Sadasivan further discloses that the particles are present to create a porous layer so that the solvent in the ink can travel through the layer to a support or base layer (column 3, lines 50-55).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to have selected from known inorganic fillers such as those taught by Sadasivan which read on the applicants' claimed fillers, absent unexpected results.

Response to Amendment

The examiner withdraws the previous rejection under 35 USC § 101 and 35 USC § 112, second paragraph. Prior art has been applied to the amended claims in the current office action.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to GREGORY CLARK whose telephone number is

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(571)270-7087. The examiner can normally be reached on M-Th 7:00 AM to 5 PM

Alternating Fri 7:30 AM to 4 PM and Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Larry Tarazano can be reached on (571) 272-1515. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/D. Lawrence Tarazano/
Supervisory Patent Examiner, Art Unit 1794

GREGORY CLARK/GDC/
Examiner
Art Unit 1794